

A CLASSIFIED LIST OF GEOMETRINA FOUND
ROUND BALHANNAH, WITH NOTES ON
SPECIES.

By E. GUEST, Balhannah.

[Read October 5, 1886.]

The Geometrina of South Australia, so far as I know, are included in five sub-families—the *Larentidæ*, *Ænochromidæ*, *Geometridæ*, *Acidalidæ*, and *Boarmidæ*.

The genera, with the exception of perhaps half a dozen, appear to be distinct from those of Europe, and I do not think that a single species mentioned below is common to these two parts of the world. The larvæ feed on trees and shrubs, as a rule, although I have little doubt that some of those of the *Acidaliadæ* are found on grass or low herbs. They are generally solitary, devoid of hair, and have the prolegs or claspers on the posterior segments only, which causes the larva to loop or draw up its body in walking. Many of the Australian species attach themselves by the anal pair to some twig or leaf, and stretch the body straight out, in which position they look exactly like a small dead branch. The perfect insects may be found flying over grass, beaten from trees or shrubs, or sitting with expanded wings on fences or walls. They mostly fly in the evening, but some few appear to be day-flying as well. I have no intention of minutely describing the species, as this has already been done by abler pens than mine, but shall draw attention to such prominent markings as may enable the student to recognise such examples as may be included in this list.

The mean will be generally given in inches and lines (thus ' and "), but where the sexes vary very much in size, that of both will be mentioned if known.

SUB-FAMILY I.—LARENTIDÆ.

Is represented in my collection by nineteen species and seven genera. They are small or medium-sized insects, frequenting grassy places, and may often be found on fences; but I do not think that they are as a rule much attracted by light.

1. MICRODES VILLOSATA, *Gn.*

Expanse, 10". Out in November.

Fore-wings dark ash-gray, mottled with darker. Hind-wings yellowish white, with a round nearly black spot at lower edge,

near anal angle. This looks as if it had been burned through the wing, and distinguishes the species immediately. Generally considered common, but I have only once captured it in this locality.

2. *PHRIXOGONUS LATICOSTATUS*, *Walk.*

Expanse, 7". October, November, December, and again in March.

General colour purplish-brown, with a much darker irregular bar across the wing. The male may be known at once by a long tuft of scales projecting from costa at one-fourth from base. This is absent in the female, which has also the dark bar much narrower and quite straight. A common insect; sits on tree trunks and fences.

3. *PHRIXOGONUS INSIGILLATUS*, *Walk.*

Expanse, 6" to 7". March.

Fore-wings more pointed and costa more arched than in *laticostatus*, and it is also lighter coloured. The costal tuft is wanting, but there is a raised knob of scales below costa at one-half. Not common.

4. *EPICYME RUBROPUNCTARIA*, *Dbl.*

Expanse, 10". November and December, and again in March.

A pretty light pink-coloured insect, with fine transverse lines of a darker shade. There are generally three or four large confluent purplish-red spots running from centre of wing to inner margin, but these are often nearly obsolete, and in one of my specimens they form a band running right across the wing. Common.

5. *ANACHLORIS SUBOCHRARIA*, *Dbl.*

Expanse, 1'. October to May.

Bright orange yellow, with a tawny stripe across wing at two-thirds. Hind margin tawny, and the space between this and central stripe is often suffused with a lighter shade of the same colour. Very common.

6. *CEPHALISSA SEVERATA*, *Gn.*

Expanse, 1' October and November.

Dark grey, with nearly black basal patch, and a broad black stripe across centre of wing. The female is more obscurely marked than the male, and might almost be taken for another species. Sits on prostrate logs, and flies very fast when disturbed. A common species.

7. *CEPHALISSA MORTUATA*, *Gn.*

Expanse, 11". March and April.

A very variable insect, if indeed all my varieties really belong to this species, as is Mr. Meyrick's opinion at present. They may mostly, however, be known by a transverse bar, broad on costa, narrow on inner margin, very angulated on outside and margined by a white line, which expands into a kind of spot near the costa. The ground colour is dark greyish-brown, and the females are darker than the males. Common.

8. CEPHALISSA CHIMARRHOA, *Meyr.*

Expanse, 10".

All the wings a bright lustrous yellowish-brown, difficult to describe. Across the wing, rather beyond one-half, is a series of seven or eight small triangular spots, with the apices turned inwards and black, the bases being white. This little insect was unknown until I took it, and I believe it has as yet only occurred here.

9. CEPHALISSA MICROCYMA, *Meyr.*

Expanse, 11".

At first sight this looks something like *chimarrhoa*, but the ground colour is lighter, the triangular spots are wanting, and the antennæ of male are plumated, whilst in that insect they are almost simple. Fairly common some years, flying among grass, but appears to be confined to South Australia, and was unknown until I took it.

10. CEPHALISSA HOLOPHANES, *Meyr.*

Expanse, 1' 1". October and November.

Fore-wings yellowish grey, with a very faint and indistinct darker bar, which is nearly straight-edged, across the centre. In some specimens, however, this is almost obsolete. Hind wings bright yellow, with darker hind margins. Only found in South Australia, and is in few cabinets as yet. It is pretty common around Balhannah, and was first taken by myself.

11. CEPHALISSA LAMPROTIS, *Meyr.*

Expanse, 10". March.

Fore-wings purplish-grey, with a broad dark purplish-brown bar across centre, very sharply angulated outwards; beyond this, on the costa, are two patches of the same colour, the first larger than the second. The hind wings are deep orange, suffused with brown. This small but handsome insect appears to be really scarce everywhere, although widely distributed. Found among grass on hillsides.

12. CEPHALISSA LANGUESCENS, *Rosenstock.*

Expanse, 1' 1". Fore-wings dark-brown, with a still darker bar across the centre. Hind-wings dark orange, suffused with

brown towards anal angle. Not a common insect, and, I believe, restricted to this colony. Flies in March.

13. *CEPHALISSA VACUARIA*, *Gn.*

Expanse, 1' 1". March and April.

A variable insect as to ground colour, which is sometimes dark-brown, sometimes tawny. There is always, however, a nearly black bar, broad at costa and pinched in the centre, running across the wing, and very much angulated on the outside. The hind-wings are grey. A common insect, flying over grass.

14. *CEPHALISSA STRUMOSATA*, *Gn.*

Expanse, 1' 5". December and January.

This is the largest and darkest of the genus yet found by me. The ground colour, however, varies a good deal, being sometimes very dark grey, and sometimes, especially in the females, positively black, in which case the head, thorax, and body are all of the same sombre hue. There is always a darker broad bar crossing the wing, very much angulated on the outside, and distinguished from any other species known to me by having two protuberances close together. Sits on palings and trees—the dark ones on charred trunks, where, in spite of their size, they are almost invisible. Rather a common species.

15. *CEPHALISSA SUBRECTARIA*, *Gn.*

Expanse, 10" to 1' 1". September and October.

A dull-coloured insect frequenting damp places near creeks, rivers, &c. It may be known at once by a straight, narrow, silvery-white bar crossing the fore wings at three-fourths, and another broader, but less distinct rounded one, at one-fourth from base. Generally common.

16. *CEPHALISSA UNCINATA*, *Gn.*

Expanse, 10" to 1' 1". October and November.

A very variable insect, both in markings and ground colour, but nevertheless easily distinguishable. The ground colour varies from yellowish-brown to purplish-red. There is always a band crossing the wing, broad on costa, narrow on inner margin, rounded on the interior, angulated on the exterior, and a dark wedge-shaped spot at costal apex, which latter is more hooked than in any other species of this genus. The extreme outer edge of outer margin is distinctly white. A very common insect in the hills. Flies over and among grass.

17. *EPYAXA SUBIDARIA*, *Gn.*

Expanse, 1' 1". September and October.

This is also rather a variable insect, at first sight something like *C. vacuaria*. The antennæ of male are, however, plumate

in *subidaria*, and simple in the other. The cross-bar also in the present species is bordered outside with white, which is not the case in *vacuaria*. A common insect in the spring.

18. LARENTIA VICISSATA, Gn.

Expanse, 1' 3". March and April.

A bright-coloured insect, easily distinguished by its orange under-wings and a broad straight silvery bar crossing the fore-wings at three-fourths. The antennæ of male are plumate, those of the female simple, and with this exception the two sexes are alike. A common insect in woods.

19. LARENTIA HELIACARIA, Gn.

Expanse, 1' 1". April and May.

May be known by four narrow silvery lines crossing fore-wing at regular intervals; the first is round, second slightly angulated, third is sharply zigzagged, and the outer one rounded. The hind-wings are dull reddish-yellow. Common in paddocks.

SUB-FAMILY II.—ÆNOCHROMIDÆ.

Of this sub-family I possess at present 11 species in eight genera, but I have little doubt that there are many more. It contains some of the largest and finest of our Geometrina, but unfortunately these all appear to be rare, and, judging from my own experience, it may be years before the collector meets with them. The fore-wings are more or less hooked at tip, and the antennæ of the males are generally plumate.

1. LAMACHA FLAVICAPITATA, Gn.

Expanse, 1' 3". September and October.

Ground colour of male grayish-ash colour with a yellow rounded stripe, bordered *inside* with bright red; brown across the wings at about one-fourth, another also yellow bordered *outside* with brown at about two-thirds. The yellow head is conspicuous in both sexes. In the female the space between the two lines is filled up with dark brown, which extends outwards some little way past the second line, and gives this sex a very distinct appearance. It is rather smaller than the male, which is unusual, the reverse being generally the case. The male has a distinct black centre spot. Rather a common insect.

2. TAXEOTIS INTEXTATA, Gn.

Expanse, 1'. Out all the summer.

An obscurely marked silvery-gray moth. The most prominent markings are, first a row of small round black dots crossing wing at one-fourth, and second a similar row running from costa to anal angle. A common insect.

3. *TAXEOTIS ARENIFERATA*, *Gn.*

Expanse, 1' 1". November and December.

A very variable moth, hardly any two being exactly alike. The males are light, and the females dark-brown, and the most constant mark is a line running diagonally across both wings from near costal apex of fore-wing to near the centre of hind margin of hind-wing, although I have specimens in which even this is reduced to a series of dots. The space outside this is generally darker than the rest of the wing, and in some specimens there is also a straight line crossing fore-wing only, at one-fourth from base. A common insect among grass.

4. *NEARCHA BUFFALARIA*. *Gn.*

Expanse, 1' 5". October, January, and February.

An obscurely-marked, although, when fresh, a pretty insect. It flies very fast, and its wings being very thin and delicate, it is difficult to get a good specimen. The ground colour varies from dark-brown to pale-yellowish, but there is always in the male a darker undulating line running from below costa (not from it), at two-thirds, to inner margin. Just inside this are about eight black dots irregularly distributed. These are wanting in the female, in which sex also the line is suffused and more orange-coloured. Not uncommon sitting on the ground among dead leaves.

5. *DICHROMODES AINARIA*, *Gn.*

Expanse, 1' 1". September and October, and again in the autumn.

The fore-wings of this little moth are difficult to describe, but the insect may be known at once by the bright orange under-wings, with deep black border, differing in this respect from any other Geometer I have seen out here. The fore-wings are blackish-brown, with still darker lines and markings. A common scrub insect, but not found in grass paddocks.

6. *DICHROMODES OBTUSATA*, *Gn.*

Expanse, 1' 11". December.

An obscure slaty-gray moth, with all four wings alike. A darker-coloured bar crosses the fore-wing of the male, but the female is almost unicolorous. Pretty common, but from its sluggish habits and dull colour not often noticed.

7. *DICHROMODES STILBIATA*, *Gn.*

Expanse, 1" 11". November, and perhaps December.

I have never yet succeeded in finding this moth in good condition, but the most distinguishing marks appear to be three oblique silvery bars crossing the wing—one near base, the second at three-fourths, and the third along outer margin.

The two first slope inwards, the third one outwards. A rare insect in this part.

8. *ÆNOCHROMIA VINARIA*, *Gn.*

Expanse, two inches. December and January.

When fresh, the thorax, body, and all the wings are of a beautiful purple-red or plum colour, but this soon fades to a yellowish-red. A broad yellow stripe runs from costal apex, which is much hooked, across both wings in a diagonal direction to centre of inner margin of hind wing. There is a black centre-spot, with yellow eye, and an indistinct line near base. The body is very thick and flat, and perhaps a beginner would hardly take it to be a Geometer at all.

Larva, length, 1' 10". Prolegs, 6, on 9-10-13 segs.

On the top of back on the eleventh segment are two large raised yellow spots with black circles. On the fourth segment are two hard black pointed horn-like projections with pale yellow bases, and on the sixth segment are two more, but here the horns are barely visible. The spiracles are small, but distinct, and orange coloured. The body is smooth, ground colour brownish-green, darkest above. Belly nearly white. The back is covered with minute white spots, from some of which a short black hair issues, but it requires a lens to see these. Head long and attenuated, reddish-brown in colour. Reposes with the body thrown out perfectly straight from the twig. Is said to feed on *Hakea*, but I have only found it as yet on *Banksia marginata*. Not common here.

9. *ARHODIA LASTOCAMPARIA?* *Gn.*

Expanse, male, 2' 2"; female, 3 inches, but varies a good deal in size. November and December.

Colour of all the wings bright yellowish-gray, minutely speckled with darker. A small and sometimes not very distinct centre spot on each wing. Sometimes, especially in the females, the whole of the wings are suffused with pink. This moth may be easily known by a large dark purple blotch on the underside of fore-wing near costal apex. The body is very stout and thick. Antennæ are shortly pectinated in the male, simple in the female. Rather a scarce insect, and there is some doubt as to the name. My insects do not appear to tally exactly with Guenée description, and they may perhaps be an allied species.

Larva, about two inches long, colour greenish-red; quite smooth; spiracles not very distinct. Prolegs on ten and thirteen segments, the latter very broad and flat. A rudimentary pair on ninth segment, but these are not used in walking. Sits stretched straight out from the twig, but when touched it

curls the forepart round with the head underneath, like a pastoral crook. On the back of the twelfth segment is a projecting semicircular disk, yellow above, black beneath. Loops very much in walking. It is full fed about the end of February, and passes the winter in the pupa state. Food plant, white gum.

10. *PHALLARIA OPHIUSARIA*, *Gn.*

Expanse, 2' 6", 2' 11". March 3rd, 1886.

Wings ample, fore-wings strongly hooked at tip; all the wings pale greenish-brown, with a very distinct ferruginous coloured stripe running from costa, near apex, in a curved direction, across both to centre of inner margin of hind-wings. The inside of this is faintly bordered with yellow. There is also a large white spot with dark border in centre of each wing. Antennæ strongly pectinated in male, thickened only in female. Rare up here—in fact, I have as yet only taken one female. The larva is unknown to me, but is said to feed on *Callistemon*. I knocked my specimen out of a white gum sapling; it flew slowly and heavily.

11. *GASTROPHORA HENRICARIA*, *Gn.*

Expanse (male) 2' 7". October 29, 1884.

Fore-wings ample costa slightly rounded; apex acute; hind margin straight, oblique. A dark purple bar crosses the forewing in the centre from costa to inner margin. The basal half of wing is light yellowish-gray, the posterior half much darker purplish-gray. Thorax and body white. Hind-wings bright orange with a broad deep purple transverse bar, outside of which are eight round purple spots. Antennæ of male very highly plumose and white. I do not know the female nor anything about the larva. My specimen came to light. Mr. Meyrick says that this beautiful insect used to be not uncommon in old collections, but he had never seen a recent specimen except mine.

SUB-FAMILY III.—GEOMETRIDÆ.

Up to the present time I have only obtained two genera with five species of this sub-family, but I know that there are several others. They are mostly green or greenish-gray insects, and appear to be generally distributed, and I doubt if any be really rare.

1. *IODIS EXTERNA*, *Walk.*

Expanse; 1 inch. November, December.

All the wings bright green, with a small dark spot in centre of each. Collar, costa and cilia crimson. Not very common here; generally considered a scarce insect.

2. *IODIS VERTUMARIA*, *Gn.*

Expanse, 1' 6".

This is the largest of the genus known to me. All wings bright green, no centre spot. Collar green, costa and cilia light yellow. A common insect.

3. *IODIS DICHLORARIA*, *Gn.*

Expanse, 1' 2".

All the wings bright green, no centre spot. Collar bright orange, costa and cilia straw-coloured. A very common moth.

4. *IODIS CARENARIA*, *Gn.*

Expanse, 11". March, April.

All the wings bright apple-green. There is a small and rather indistinct purple spot on fore-wing rather below the costa, and a large square red one in centre of hind-wing. Collar, costa, and cilia red. This is the smallest, and in this neighbourhood the rarest of the genus. When fresh it is a very pretty insect.

5. *HYPOCHROMA OCCULTARIA*, *Don.*

Expanse, male, 1' 7"; female, 1' 10". March and April.

A variable insect as to size. I have males only 1' 2" across the wings. The upper side of all the wings is a bright silvery-gray, with transverse wavy lines, and a black dash running from the centre of the costa of fore-wing to middle. Underneath the wings are all snow white, with two egg-shaped black spots near base, a larger one beneath centre of costa; a crimson line running from costa half-way across wing, beyond which is a large black smear. The underneath of hind-wings show a deep black border lined with crimson inside. There is also a sharp-edged, triangular, cinnamon-coloured spot that appears to be devoid of scales about the centre of fore-wing, the apex pointing inwards. The antennæ of male are plumose, but running to a point. Those of the female are simple.

Larva.—Length, 2' 2". Prolegs appear to exist only on the twelfth and thirteenth segments, but the segments are very crowded together, and the front pair may be on the eleventh. The thirteenth segment is a bifid arrangement running to a point behind, and cleft. No sign of any other prolegs, the belly, even under a lens, appearing smooth and polished. The legs proper are also very small, and nearly invisible when the larva is at rest. The head terminates in a long pointed projection similar to that at the anal end, only it is hard, and not cleft. Colour, all over alike; dull apple-green, with a dull crimson stripe down each side, in which are the spiracles, which are small and black, and up the centre of the belly runs a narrow yellowish-white stripe. Feeds on white gum; holds

very hard to the leaf, with the body thrown out straight and rigid. Of course loops very much in walking. Full-fed about the middle of December.

SUB-FAMILY IV.—ACIDALIADÆ.

This sub-family is represented here by only four species, but three at least of these by their great numbers are perfect pests to the collector.

1. *ACIDALIA RECESSATA*, *Walk.*

Expanse, 10". Out all summer and autumn.

All the wings light-grey, with various faint wavy lines. Sits with its wings expanded on leaves, &c. Extremely abundant.

2. *ACIDALIA ALBICOSTATA*, *Walk.*

Expanse, 7". All the spring and summer.

A small, and when fresh, pretty insect; but it soon fades. All the wings light purplish-red, with a broad light bar beneath costa of fore-wings. I generally beat it from *Banksia*, but hardly think that is its proper food-plant, or, at any rate, not the only one. The male is much smaller and brighter than the female. Very abundant.

3. *ACIDALIA PROSAULA*, *Meyr.*

Expanse, 8".

The two sexes are very different looking in this species. The male is generally nearly unicolorous, of a dark olive-brown colour. The female is much lighter and grayer, with a broad transverse band crossing both wings.

A local and rather scarce little insect, that had been overlooked until I took it, and has been as yet only found in this immediate neighbourhood. Flies over and among grass.

4. *ACIDALIA RUBRARIA*, *Dbl.*

Expanse, 10". Flies all the year round, except perhaps in July.

This is the little reddish brown moth that anybody walking through the hill paddocks or scrub kicks up by hundreds. The ground colour is variable, but the markings consist principally of two wavy dark lines across both wings, inside which the colour is lighter. This appears to be constant, whilst other lines vary in almost every specimen.

SUB-FAMILY V.—BOARMIADÆ.

This sub-family appears to be the best represented of any in this neighbourhood, and contains many striking forms. Up to the present I have taken 24 species in fourteen genera. As a rule they are medium or large-sized moths, the greater number

occurring in the autumn. Many of the species are very similar to one another, and hard to separate in the perfect state, especially the females.

1. *SCIOGLYPTIS CANESCARIA*, *Gn.*

Expanse, 1' 3". Flies in autumn.

A sombre, dark brown insect, mottled with darker shadings. A broad suffused black band crosses both wings from costal apex of fore to centre of inner margin of hind-wing. Beneath this is a narrow wavy white line. A common Queensland insect, but rare here.

2. *SCIOGLYPTIS MUNDIFERA*, *Walk.*

Expanse, 1' 3". Generally found in autumn, but there is sometimes a spring brood also. Variable.

Somewhat similar to the last, but the ground colour is much paler; the markings and transverse bar have a distinct purplish tinge, and the white line is altogether absent. Most likely not uncommon, but I have as yet secured few specimens, having long confused it with the following species.

3. *THALLOGAMA ATTENTA*, *Walk.*

Expanse, 11". April and May, and perhaps in the spring.

In outward appearance very like the last, but besides its smaller size, the antennæ of male, although pectinated, have the pectinations much shorter than in *Scioglyptis*, in which they are very long.

4. *ZERMIZINGA INDOCILISARIA*, *Walk.*

Expanse, 1' 3". April.

Ground colour brown, with various wavy black lines crossing both wings. It may be distinguished from any of the preceding by these lines starting from the costa, and not the apex of the wing, and by the long light-coloured ciliations of the antennæ of the male. The female is semi-apterous. Apparently scarce here, but widely distributed in Australia, and is also found in New Zealand.

5. *PHELOTIS COGNATA*, *Walk.*

Expanse, 1'. August, also February and March.

Ground colour silvery-gray, with various indistinct black dots and lines crossing the wing from costa to inner margin. The ciliations of the antennæ are very long for about three-quarters of its length, then shorten off rapidly, and the end is simple.

6. *PHELOTIS EXCURSARIA*, *Gn.*

Expanse, 1' 6".

I am rather uncertain about this species, and may have two

allied forms mixed together, but the true *P. excursaria* may, I think, be known by the strongly indented outer margin of hind-wings. It is a difficult insect to describe, and the description would read much like some of the preceding, but it is distinct enough to the eye, the ground colour being a kind of bright tawny-brown, and there is one narrow black line running from three-fourths of costa in a zigzag direction to centre of wing, and then turning abruptly is continued towards inner margin. I do not notice this on any of the other species. Rare here, and I am uncertain about date of capture.

7. *NERITODES VERRUCATA*, *Gn.*

Expanse, 1' 3". October, November.

All the wings pale gray, but when quite fresh suffused with a delicate green tinge. The male has a curious round raised spot near base of fore-wing, which, however, is absent in the female. A common insect among grass.

8. *AMELORA LEUCANIATA*, *Gn.*

Expanse, 1' 6". March.

Ground colour pale greenish-brown with nine latitudinal black bars, between each of which are silvery-white ones, also nine in number. The head is yellow and hind-wings light-brown or pale smoke colour. This handsome moth is common most seasons amongst grass, and flies fast.

9. *AMELORA GONIOTA*, *Meyr.*

Expanse, 1'. March.

Wings silvery gray with a greenish tinge. A very distinct, but narrow black angulated line, crosses the fore-wing at about one-fourth, and another very zigzag one at about three-fourths. There is also a large but indistinct central blotch. A scarce moth, of which I have only as yet taken two or three specimens, and I do not think that it is known elsewhere.

10. *AMELORA DEMISTIS*, *Meyr.*

Expanse, 1' 3". Autumn months.

This is another species that has as yet only been taken here, and I am still uncertain about the exact date, having confounded it with the following species. It is a dull brownish-gray moth, centre spot indistinct, and the transverse lines reduced to rows of dots. It is certainly the most unattractive looking of the genus.

11. *AMELORA SPARSULARIA*, *Gn.*

Expanse, 1' 11". March.

Something like *A. demistis*, but smaller and brighter coloured. The black dots forming the lines are closer together, smaller,

and blacker, and there is generally a very distinct centre spot. A common insect, flying among grass.

12. *AMELORA AMBLOPA*, *Meyr.*

Expanse, 1' 5". March.

Ground colour much as in *A. demistis*, but there is a dark rounded line running from costa at four-fifths to inner margin at two-thirds. Outside this the colour is more of a silvery gray. A common moth, but appears to be rather local.

13. *EPICOMPSA XANTHOCROSSA*, *Meyr.*

Expanse, 8". March 26th, 1886.

This pretty little insect is in shape a good deal like the English Peacock Moth (*Macaria notata*), to which it is in fact related. My one specimen is the only one known, and it was taken just about daybreak. The general tint of fore-wings is ash colour, but the extreme costal edge is orange, and a narrow stripe of the same colour runs round the hind margin. There are two distinct triangular-shaped black marks on costa, and a series of semicircular ones along the hind margin, which last is highly angulated and dentated. The basal half of hind-wings is gray, the outer half being rich brown; and there is a large round patch of this same colour at anal angle of fore-wings. The genus as well as species is new to science.

14. *IDIODES APICATA*, *Gn.*

Expanse, 1' 11" to 2'. August, January, March.

One of the most variable insects I have met with; hardly two specimens are alike, and there appear to be four distinct types of markings. The fore-wings are sharp-pointed, and strongly hooked at apex, and there is generally a straight diagonal line running from apex across both wings to centre of inner margin of the hind one. In type 1 the ground is greenish, and stripe yellow. In type 2 the ground is reddish-brown, and stripe dark purplish-brown. In type 3 the whole of both wings is suffused with dark purplish-red, forming indistinct smeary blotches; while in type 4—which is by far the rarest—the ground is as in type 1, but on the outside of the yellow line are three large round bluish-black spots, with white centres; the two nearest the apex being nearly confluent. Some years this curious moth may be obtained plentifully by beating gum saplings, but the summer brood is always dwarfed in size, and some years the species appears to be absent altogether.

15. *MNESAMPELA PRIVATA*, *Gn.*

Expanse, 1' 6". March and April.

Fore-wings hooked; yellowish-brown, with a darker shade across fore-wing at half. Hind-wings bright orange. Common

16. *MNESAMPELA COMARCHA*, *Meyr.*

Expanse, 1' 8". April.

A good deal like the last superficially, but the ground colour of all the wings is a pale brownish purple. The antennæ of males also show a specific difference, and the insect appears later. This moth seems to be rare.

17. *MNESAMPELA FUCATA*, *Feld.*

Expanse, male, 2' 4". (I have never seen the female). May.

Fore-wings orange, speckled all over with minute purple spots. There are also three larger red spots—one at base, one at centre of wing near base, and the third below costa at about two-thirds. The hind-wings are pale primrose-yellow, without markings. The female is said to be larger and darker than the male. A rare insect everywhere.

18. *CRIOMACHA BELIDEARIA*, *Feld.*

Expanse, 2' 1" to 2' 5". May.

Another variable insect, which may be separated into two distinct types, which remain good in both sexes. So distinct are they in appearance that I considered them different species, but Mr. Meyrick thinks otherwise, and so I place them together. In the first the wings are bright brick-red, without any distinct markings; in the other they are pale reddish brown, speckled all over with brownish-purple, and with a more or less distinct darker band across centre of wings. The hind wings are alike in all, reddish-white, inclining to purple on outer margin. Fairly common some years; absent others.

19. *CRIOMACHA ERIBOLA*, *Meyr.*

Expanse, 2' 4". March.

Only one specimen of this species is known, a female, and it is just possible that it may be a very abnormal variety of *belidearia*, but it is such an entirely different looking insect that Mr. Meyrick decided to name it. The fore-wings are dark brown with a yellowish tinge; a black outward curved zigzag line crosses them at one-third, and another, nearly straight, at four-fifths. The thorax is the same colour as the wings, but the crest and head are orange, thus differing from *belidearia*, in all of which the head is the same colour as the wings. The hind-wings are pale yellow, with a deep reddish-brown border. The body is pale yellow.

20. *CHLENIAS ARIETARIA*, *Gn.*

Expanse, 1' 5". March and April.

Fore-wings brown, suffused with silvery-gray in centre. Three narrow black streaks run from near base up the centre

of wing, the veins of which are also tinged with black, especially towards outer margin. The hind wings are pearly white. There is a curious hard bifurcated horn-like process on the front of head. A common insect. The male flies slowly just about day-break, but the female often comes to light.

21. *CHELENIAS ZONÆA*, *Meyr.*

Expanse, 1' 7". April.

This species has, I believe, so far only been taken by myself at Balhannah, at any rate it was undescribed. It is larger, darker, and more glossy than *C. arietaria*, and is entirely destitute of the bifurcated horn on the head. The hind wings are sometimes smoke-coloured, sometimes white at base, with dark smoke-coloured margin. My specimens were all bred from the larva, and I have only twice seen the perfect insect at large, and never on the wing.

Larva.—When full-fed about one inch in length, banded or striped as follows:—Orange stripe down centre of back; then four wavy black lines with bluish-white spaces between; then a broad primrose stripe; then four more black lines, the three last interrupted with space between yellowish white, and then a broad black line. Below this the body is yellow, with four purple wavy lines, spiracles distinct, orange, which latter colour predominates on all the broad stripes towards the head, which is yellow. Body smooth to the eye, but under the lens there are a few sparse black hairs; claspers only visible on the tenth and thirteenth segments. Feeds stretched out on food plant, but on the slightest touch rolls in a ring and drops to the ground. Feeds on *Aster axillaris*, and is full-fed in September, but although I tried to force them, not one would emerge before middle of April.

22. *STIBAROMA MELANOTOXA*, *Meyr.*

Expanse, 1' 5".

This is a handsome silvery-grey moth, unknown to science until taken by myself. There is a narrow but sharply-defined black line at one-fourth, which is very acutely angulated outwards, and another broader and less acutely angulated at three-fourths. Outside this is a dark blackish smear. Hind wings silvery white, with dark broad border. My specimen is a male; but I possess also a darker insect (a female), that may belong to this species, but the markings are very different, and I am not sure.

23. *PARALEA BEGGARIA*, *Gn.*

Expanse, 2' 1"; female rather larger. April.

All the wings of the male are of a dark grayish-purple, but the hind-wings of female are whitish at base, purple outside.

There is a distinct black centre spot in the female, but this is nearly wanting in the other sex. Scarce here, and, I believe, everywhere else, but apparently widely distributed. It is one of the few insects that appear to have a preference for the red gum.

24. *DRYMOPTILA TEMENITIS*, *Meyr.*

Expanse, one inch. April 7, 1879.

This curious insect is as yet unique, and I have never been able to find a second. Both genus and species are new to science. Fore-wings purplish-gray, with a reddish cross line near base, and a curved and slightly indented black one running from costa at about four-fifths to near the anal angle. The space between this and the outer margin is chocolate colour. Hind-wings greyish brown.

